kcgee@unitedpark.com
11/26/2007 09:16 PM

To Kathryn Hernandez/EPR/R8/USEPA/US@EPA

cc "Longwell, Daryl" <Daryl.Longwell@tetratech.com>, "Michele Straube" <mstraube@mindspring.com>, kcgee@unitedpark.com

bcc

Subject RE: Lower Silver Creek -- FYI and Questions

Kathy:

I am making a leap on a lot of what I say here, so please go easy on me. I jump around a lot so be careful.

In summary, you will need at least 200,000 cubic yards just to cover the repository. 60,000 cubic yards of soil for the repository, 50,000 cubic yards of rock material for stream reinforcement and probably another 50,000 yards for roads, dikes and other uses that will come up during the remediation. So this feels like about 400,000 yards of materials of various types.

As I state this and what is below, I feel that it is not adequate. I feel that I don't have enough information to even have an educated guess on the quantity of material needed.

Just to cover the repository, if it is the 60 acres that I recall you mentioned at the meeting on the 16th, you will need almost 200,000 cubic yards. This assumes a thickness of 24 inches of non-compacted material. Machine compacting can get you a firm 18" of cover. A 60 acre site just over 15 feet deep is 2.6 million square feet or so. You may need over 60,000 cubic yards of topsoil or some organic additive to promote growth on the final cap. The cover from the construction sites can be a growth media but the volcanic materials are less than optimum for this type of material.

That is the final cover however. You will need interim cover and seasonal cover as well. The logistics of running heavy equipment on this material will be complicated in that most of it will be wet and may not support equipment until it dries out and then will generate a good deal of dust. You may find that you have to build a layered repository that could consist of a couple of feet of tails and a foot or so of clean fill/cover. This may help. If the repository site is one that can be engineered correctly much of this may not apply. Dumping stations with LGP equipment moving the tailings away from the dump station may work much better that what I presented above. You may still need interim cover.

If the repository location lends itself to this concept it may be operated much like a landfill. Excavating cells and burying the tailings in the cells. There are a lot of issues with this but the advantage is that it can generate the material you need to do the remediation as well as the final cap for the repository. It may also be possible to build a dam across a ravine and place the materials behind the dam. This option demands material rather than generate it.

As for materials needed for the remediation, you will need a good supply of rock material to act as riprap for a new channel if one is constructed. The water should be low energy but you will need materials to establish banks, meanders, etc. Synthetic materials can work for this as well and the stream channels can be revegetated requiring less rip-rap. This will be difficult to do when it is wet. I would estimate about 50,000 yards of rock material between 4 and 18" in size with the majority being less than 12".

Be careful with the volcanic materials as rip-rap. It decrepitates and exfoliates which will cause it to lose its ability to protect the stream. However, the need for this protection will diminish over time as the vegetation along the stream banks is restored.

During the remediation process, much of the contaminated materials can be removed with elevating scrapers that can self load. The bulk of the fine cleaning will probably have to be done with excavators. This type of equipment is the only type than can selectively clean soil without removing 2 feet of it. Much of the tailings material lies on the undisturbed original ground surface. An inch or two below this original surface is all that needs to be removed in order to get it clean. It will also help to reduce the quantities of restoration materials needed. Some areas of the floodplain may contain enough soil for it to be harvested for areas where it is lacking. Over excavating on a site of this size can generate tens of thousands of yards of material if it is not watched.

Can I get the wetland delineation and the study area in CAD?

Thanks

Kerry

On Nov 26 16:19, Hernandez.Kathryn@epamail.epa.gov wrote:
>
> Subject: RE: Lower Silver Creek -- FYI and Questions
>
> How much clean fill do you think we will need if we excavate the 1.5
> mill?
>
> Kathryn Hernandez
> USEPA, Region VIII (8EPR-SR)
> 999 18th Street, Ste 300
> Denver, CO 80202
> (303) 312-6101(office)
> (720) 352-7497(cell)
>
>
>
> "Longwell,
> Daryl"
> <Daryl.Longwell@ To
> tetratech.com> "Michele Straube"
> <mstraube@mindspring.com>
> 11/26/2007 04:14 cc
> PM Kathryn
> Hernandez/EPR/R8/USEPA/US@EPA
> Subject
> RE: Lower Silver Creek -- FYI and
> Questions
>
>
>
>
>
>
>

>
>
>
>
> Michelle - Thanks for the property info. Looks like SS-27-B-1 is
> outside the study area. Is the "soils study" submitted with the plat
> for SS-27 and SS-28 intended to meet the requirements of the County's
> planned ordinance?
>
> I will touch base with Kathy on the other statements and get you a
> response.
>
> Also, in response to your previous email (11/17/07) following the
> incentives meeting we have: 1) sent another hard copy of the property
> ownership map to you today; 2) sent the digital version of the orange
> study area boundary to Nora; and 3) posted a pdf version of the property
> ownership poster to the ftp site.
>
> Regards, Daryl
>
>
> Daryl L. Longwell, P.E. | Senior Project Manager
> Tel 303.447.1823 | Fax 303.447.1836
> Cell 303.588.0902 | Email daryl.longwell@tetratech.com
>
> Tetra Tech
> 4900 Pearl East Circle, Suite 300W | Boulder, CO 80301
>
>
> From: Michele Straube [mailto:mstraube@mindspring.com]
> Sent: Monday, November 26, 2007 3:26 PM
> To: Longwell, Daryl
> Cc: Kathy Hernandez
> Subject: Lower Silver Creek -- FYI and Questions
>
> Daryl: I'm going through my notes from the "incentives" meeting a week
> or so ago and found the following info from Jami Brackin (Deputy Summit
> County Attorney):
> Plat SS-27-B-1 (Silver Gate Ranches, Walt Plum), now subdivided,
> used to be heavily irrigated
> Plats SS-27 and SS-28 (Phase II) -- a soils study was submitted
> with the plat notice, but probably only for the highest ground
> Questions: Are these statements accurate (for purposes of the meeting
> summary)?
> Estimated volume of clean fill that might be needed in LSC: 1
> million yards
> Estimate of volume of contaminated materials that may need to be
> disposed in a repository: 1.5 million yards
> Estimated minimum size of repository: 60 acres
> Thanks. Mich.
>
>
> Michele Straube, Mediator/Facilitator
> CommUnity Resolution, Inc.
> 2915 E. Oakhurst Drive
> Salt Lake City, UT 84108
> 801-583-6362 (o); 801-582-2043 (fax)
> 801-582-2043 (h); 801-455-5789 (cell)
> mstraube@mindspring.com
> www.active.com/donate/huntsman08/GoMichGo
>